

Claims

1. A transformable mandrel for production of single curvature sandwich panels folded core being the shaping surface from plane trapezoid elements pivotedly connected in-between with the use of the flexible material whereon said elements are fixed with the use of glue is characterized by that the shaping surfaces includes the plane elements, made in the form of isosceles triangles and placed in line between the trapezoid elements, wherein said plane elements are pivotedly connected with said trapezoid elements along the folded structure saw-tooth lines and are oriented so that their bases facing each other form the pivots along the protrusions zigzag lines, and their vertices form the pivots along the recesses zigzag lines.

2. A transformable mandrel according to claim 1 is characterized by that the base B of the triangular elements along the protrusions zigzag lines of the folded structure is equal to the function

$$B = f(R, S, L, H),$$

where R is the folded core block curvature radius,

S is the step between the recesses zigzag lines of the folded core,

L is the step between the saw-tooth lines,

H is the height of the folded core block.

3. A transformable mandrel according to claim 1 is characterized by that the minimal widths S_1 and S_2 of the pivots along the lines, which correspond to the lines of protrusions and recesses of the ready-made folded core, are equal to

$$S_1 = 2t + 2m + 2z;$$

$$S_2 = 2t + 2m,$$

where t is the shaping surface plane elements material thickness,

m is the thickness of the base and the glue,

z is the blank material thickness.